

Appendix 3

Association between low health literacy and all-cause mortality. Hazard ratios with corresponding 95% confidence intervals from multivariable Cox proportional hazards regression models with high health literacy as the reference category. Based on participants surviving more than 12 months post interview

| Hazard Ratio (95% confidence interval) | | | | | | | | |
|--|--|--------|---|--------|--|--------|---|--------|
| | Model 2 (adjusted for age, sex, wealth, education, occupation, ethnicity) | | Model 3 (adjusted as model 2 + baseline health status) | | Model 4 (adjusted as model 3 + health behaviours) | | Model 5 (adjusted as model 4 + cognitive measures) | |
| | | p | | p | | p | | p |
| Health literacy score | | | | | | | | |
| High | Reference | | Reference | | Reference | | Reference | |
| Medium | 1.20 (0.98 to 1.46) | 0.076 | 1.16 (0.95 to 1.42) | 0.144 | 1.15 (0.94 to 1.41) | 0.168 | 1.07 (0.87 to 1.31) | 0.508 |
| Low | 1.57 (1.29 to 1.92) | <0.001 | 1.47 (1.20 to 1.79) | <0.001 | 1.41 (1.15 to 1.73) | 0.001 | 1.26 (1.03 to 1.56) | 0.027 |
| Age, years | | | | | | | | |
| 52 to 59 | Reference | | Reference | | Reference | | Reference | |
| 60 to 69 | 2.51 (1.74 to 3.63) | <0.001 | 2.27 (1.57 to 3.28) | <0.001 | 2.30 (1.59 to 3.33) | <0.001 | 2.20 (1.52 to 3.18) | <0.001 |
| 70 to 79 | 7.26 (5.14 to 10.3) | <0.001 | 5.82 (4.10 to 8.25) | <0.001 | 5.99 (4.22 to 8.52) | <0.001 | 5.28 (3.70 to 7.54) | <0.001 |
| 80+ | 19.6 (13.9 to 27.7) | <0.001 | 14.5 (10.2 to 20.6) | <0.001 | 14.7 (10.3 to 21.1) | <0.001 | 12.0 (8.3 to 17.4) | <0.001 |
| Sex | | | | | | | | |
| Male | Reference | | Reference | | Reference | | Reference | |
| Female | 0.62 (0.53 to 0.73) | <0.001 | 0.58 (0.49 to 0.69) | <0.001 | 0.57 (0.48 to 0.67) | <0.001 | 0.58 (0.49 to 0.64) | <0.001 |
| Educational qualifications | | | | | | | | |
| None | Reference | | Reference | | Reference | | Reference | |
| Up to degree level | 0.98 (0.81 to 1.19) | 0.983 | 0.99 (0.82 to 1.20) | 0.988 | 1.01 (0.84 to 1.23) | 0.899 | 0.92 (0.71 to 1.18) | 0.504 |
| Degree or equivalent | 0.92 (0.70 to 1.21) | 0.917 | 0.92 (0.69 to 1.21) | 0.917 | 0.971 (0.73 to 1.28) | 0.834 | 1.03 (0.82 to 1.30) | 0.789 |
| Occupational class | | | | | | | | |
| Managerial | Reference | | Reference | | Reference | | Reference | |
| Intermediate | 0.94 (0.73 to 1.20) | 0.599 | 0.95 (0.74 to 1.22) | 0.672 | 0.93 (0.72 to 1.19) | 0.555 | 0.92 (0.71 to 1.18) | 0.509 |

| | | | | | | | | |
|--------------------------------------|---------------------|-------|---------------------|--------|---------------------|--------|----------------------|--------|
| Routine | 1.07 (0.85 to 1.35) | 0.577 | 1.06 (0.84 to 1.33) | 0.625 | 1.08 (0.85 to 1.36) | 0.543 | 1.03 (0.82 to 1.30) | 0.785 |
| Wealth quintile | | | | | | | | |
| Lowest (poorest) | Reference | | Reference | | Reference | | Reference | |
| Highest (wealthiest) | 0.60 (0.50 to 0.89) | 0.007 | 0.77 (0.58 to 1.04) | 0.084 | 0.92 (0.68 to 1.24) | 0.590 | 0.94 (0.70 to 1.27) | 0.699 |
| Missing | 1.13 (0.75 to 1.71) | 0.545 | 1.03 (0.68 to 1.56) | 0.879 | 1.02 (0.68 to 1.54) | 0.921 | 1.03 (0.68 to 1.56) | 0.879 |
| Ethnicity | | | | | | | | |
| White | Reference | | Reference | | Reference | | Reference | |
| Non-white | 1.27 (0.77 to 2.09) | 0.352 | 1.13 (0.69 to 1.87) | 0.628 | 1.15 (0.70 to 1.90) | 0.591 | 1.19 (0.73 to 1.96) | 0.505 |
| Missing | 1.12 (0.85 to 1.47) | 0.434 | 1.06 (0.80 to 1.39) | 0.697 | 1.03 (0.78 to 1.36) | 0.83 | 1.02 (0.77 to 1.34) | 0.907 |
| Health status | | | | | | | | |
| Limiting long-standing illness | | | 1.49 (1.25 to 1.79) | <0.001 | 1.35 (1.12 to 1.62) | 0.001 | 1.34 (1.12 to 1.61) | 0.002 |
| Limited activities of daily living | | | 1.81 (1.44 to 2.28) | <0.001 | 1.67 (1.32 to 2.12) | <0.001 | 1.67 (1.32 to 2.12) | <0.001 |
| Depressive symptoms | | | 1.16 (0.95 to 1.42) | 0.158 | 1.08 (0.88 to 1.32) | 0.484 | 1.03 (0.84 to 1.27) | 0.752 |
| Hypertension | | | 0.89 (0.75 to 1.05) | 0.146 | 0.88 (0.74 to 1.04) | 0.126 | 0.89 (0.75 to 1.05) | 0.173 |
| Heart disease | | | 1.16 (0.98 to 1.38) | 0.085 | 1.17 (0.98 to 1.39) | 0.075 | 1.12 (0.98 to 1.39) | 0.083 |
| Diabetes | | | 0.98 (0.74 to 1.30) | 0.890 | 0.95 (0.72 to 1.26) | 0.727 | 0.96 (0.73 to 1.27) | 0.789 |
| Stroke | | | 1.31 (0.95 to 1.79) | 0.098 | 1.26 (0.92 to 1.72) | 0.159 | 1.21 (0.88 to 1.66) | 0.234 |
| Cancer | | | 2.52 (1.87 to 3.40) | <0.001 | 2.56 (1.90 to 3.46) | <0.001 | 2.51 (1.86 to 3.39) | <0.001 |
| Asthma | | | 0.95 (0.73 to 1.22) | 0.661 | 0.94 (0.73 to 1.21) | 0.627 | 0.94 (0.73 to 1.21) | 0.626 |
| Chronic lung disease | | | 1.33 (0.83 to 2.13) | 0.242 | 1.27 (0.79 to 2.04) | 0.324 | 1.28 (0.80 to 2.06) | 0.305 |
| Health behaviours | | | | | | | | |
| Current smoking | | | | | 1.68 (1.35 to 2.09) | <0.001 | 1.66 (1.34 to 2.07) | <0.001 |
| Exercise ≥1/wk | | | | | 0.57 (0.48 to 0.68) | <0.001 | 0.58 (0.48 to 0.69) | <0.001 |
| Drink alcohol daily/ almost daily | | | | | 1.06 (0.89 to 1.27) | 0.525 | 1.08 (0.90 to 1.30) | 0.385 |
| Cognitive function | | | | | | | | |
| Time orientation, correct date | | | | | | | 0.79 (0.66 to 0.94) | 0.007 |
| Recall: mean no. words, (SD) | | | | | | | 0.95 (0.90 to 1.00) | 0.052 |
| Fluency: no. animals, (SD) | | | | | | | 0.98 (0.97 to 0.996) | 0.014 |

